

Total No. of Printed Pages – 3

SS/PBN-I/BP/8-16

2 0 1 6

(August)

BIOPHYSICS & BIOCHEMISTRY

Full Marks : 75

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer **all** questions

*Write the answers to the two Halves
in separate books*

FIRST HALF

1. Answer the following: 1×5=5
- (a) What is the SI unit of acceleration?
 - (b) Name the instrument used to measure electric current.
 - (c) Which measures intensity of sound?
 - (d) Name the eye problem in which people do not see distant object.
 - (e) Name one radioactive element.

(Turn Over)

(2)

2. Answer the following: $2 \times 5 = 10$
- (a) Differentiate between speed and velocity.
 - (b) Define frictional force. Give its two uses.
 - (c) Give two appropriate ways to control noise pollution.
 - (d) Convert 103° F into Celsius
 - (e) State the energy conservation principle.
3. Answer the following: $3 \times 3 = 9$
- (a) Give three appropriate applications of gravitational force in nursing.
 - (b) State and explain laws of refraction
 - (c) Draw the models of the atoms Na and Cl.
4. Draw neat and labeled diagram of human eye. 4
5. Write short notes (*any two*) $3\frac{1}{2} \times 2 = 7$
- (a) Pacemaker
 - (b) Capacitor
 - (c) CRO

SECOND HALF

Answer *any two* from Q. No. 6 to Q. No. 8

6. Define carbohydrate. Describe how digested carbohydrates are absorbed from intestine. How extra amount of glucose is stored in our body? $2+6+2=10$
7. What are normal fasting and post prandial blood sugar levels? What is diabetes mellitus? Differentiate between diabetes mellitus Type I and Type II. $2+2+6=10$

(Continued)

(3)

8. What are essential fatty acids? "HDL is called Good Cholesterol", justify the statement. What is the role of bile salt in fat digestion? 3+4+3=10
9. Write short notes on (*any five*) 3×5=15
- (a) Dehydration
 - (b) Ketone body formation
 - (c) Atherosclerosis
 - (d) Essential amino acids
 - (e) Fluid Mosaic model of membrane structure.
 - (f) Name mitochondrial enzymes of urea cycle.
 - (g) Write normal plasma value of: Na, Ca, K, and Iodine.
10. Define Enzyme. Describe in brief Lock & Key Model of Enzyme action. 5

Or,

Describe paper chromatography technique. 5

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